

AMENDMENT TO THE CLAIMS

~~BEST AVAILABLE COPY~~

Claims 1-257 (canceled)

258. (currently amended) A memory element, comprising:
a first dielectric material having an opening, said opening having a sidewall surface and a bottom surface;
a conductive material lining the sidewall surface of
said opening;
a second dielectric material formed over said
conductive material within said opening; and
a programmable resistance material electrically coupled
to a top surface of said conductive material,
said top surface having a lateral dimension less than 1000
Angstroms, said conductive material having a substantially
uniform thickness along said sidewall surface.

259. (previously presented) The memory element of claim 258,
wherein said conductive material is at least one conductive
sidewall spacer.

260. (previously presented) The memory element of claim 258,
wherein said conductive material is formed over a portion of
the bottom surface of said opening, said portion being less
than the entire bottom surface of said opening.

261. (previously presented) The memory element of claim
258, wherein said opening is a trench.

262. (previously presented) The memory element of claim 258,
wherein said opening is a hole.

263. (previously presented) The memory element of claim 258,
wherein said conductive material comprises at least one
material selected from the group consisting of titanium

nitride, titanium aluminum nitride, titanium carbonitride, titanium silicon nitride, carbon, N- doped polysilicon, titanium tungsten, tungsten silicide, tungsten, molydenum, N+ doped polysilicon.

264. (previously presented) The memory element of claim 258, wherein said programmable resistance material includes a phase change material.

265. (previously presented) The memory element of claim 258, wherein said programmable resistance material includes a chalcogen element.

266. (previously presented) The memory element of claim 258, wherein said top surface is a top edge of said conductive material.

267. (previously presented) The memory element of claim 258, wherein said conductive material includes one or more protruding portions extending toward said programmable resistance material.

268. (previously presented) The memory element of claim 258, wherein said first dielectric material and said second dielectric material are formed of the same material.

Claims 269-275 (canceled)

276. (new) The memory element of claim 258, wherein said top surface has a dimension less than 500 Angstroms.

277. (new) The memory element of claim 258, wherein said top surface has a dimension between about 50 and about 1000 Angstroms.

278. (new) A memory element, comprising:
a first dielectric material having an opening, said
opening having a sidewall surface and a bottom surface;
a conductive material lining the sidewall surface of
said opening;
a second dielectric material formed over said
conductive material within said opening; and
a programmable resistance material electrically coupled
to a top surface of said conductive material, said
conductive material being formed over a portion of the
bottom surface of said opening, said portion being less than
the entire bottom surface, said portion being adjacent to
the sidewall surface of said opening, said second dielectric
layer being formed over the remainder of the bottom surface
of said opening.

279. (new) The memory element of claim 278, wherein said
conductive material is at least one conductive sidewall
spacer.

280. (new) The memory element of claim 278, wherein said
opening is a trench.

281. (new) The memory element of claim 278, wherein said
opening is a hole.

282. (new) The memory element of claim 278, wherein said
conductive material comprises at least one material selected
from the group consisting of titanium nitride, titanium
aluminum nitride, titanium carbonitride, titanium silicon
nitride, carbon, N- doped polysilicon, titanium tungsten,
tungsten silicide, tungsten, molydenum, N+ doped
polysilicon.

283. (new) The memory element of claim 278, wherein said programmable resistance material includes a phase change material.

284. (new) The memory element of claim 278, wherein said programmable resistance material includes a chalcogen element.

285. (new) The memory element of claim 278, wherein said conductive material includes one or more protruding portions extending toward said programmable resistance material.

286. (new) The memory element of claim 278, wherein said first dielectric material and said second dielectric material are formed of the same material.

287. (new) The memory element of claim 278, wherein said top surface has a lateral dimension less than 1000 Angstroms.

288. (new) The memory element of claim 278, wherein said top surface has a lateral dimension between about 50 and about 1000 Angstroms.

289. (new) The memory element of claim 278, wherein said top surface has a lateral dimension less than 500 Angstroms.

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- BLACK BORDERS**
- IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- FADED TEXT OR DRAWING**
- BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- SKEWED/SLANTED IMAGES**
- COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- GRAY SCALE DOCUMENTS**
- LINES OR MARKS ON ORIGINAL DOCUMENT**
- REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.